

### **REMARKS**

This Application has been carefully reviewed in light of the Office Action mailed April 7, 2005. In the Office Action, Claims 23-34 were rejected. Claims 23-34 remain pending in the Application. Applicants respectfully request reconsideration and favorable action in this case.

In the Office Action, the following actions were taken or matters were raised:

### **SECTION 103 REJECTIONS**

Claims 23-28 and 32-34 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2004/0105476 issued to Wasserbauer (hereinafter "*Wasserbauer*"). Claims 29-31 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Wasserbauer* as applied to claims 23-28 and further in view of U.S. Patent Publication No. 2002/0122615 issued to Painter et al. (hereinafter "*Painter*"). Applicants respectfully traverse these rejections.

Of the rejected claims, Claim 23 is independent. Applicants respectfully submit that *Wasserbauer* does not disclose, teach or suggest the limitations of independent Claim 23. For example, independent Claim 23 recites, at least in part, "a first optical waveguide formed in a first dielectric layer," "an optical interconnect formed in a second dielectric layer disposed above the first dielectric layer" and "a second optical waveguide formed in a third dielectric layer disposed above the second dielectric layer" where "the optical interconnect is operable to conduct optical signals from the first optical waveguide to the second optical waveguide" (emphasis added). In support of the Examiner's rejection of Claim 23, the Examiner appears to refer to figure 27 of *Wasserbauer* and, specifically, to a ring 209 and waveguides 160a and 160b of *Wasserbauer* as depicted in at least figure 27 of *Wasserbauer*, as being equivalent to Applicants' invention (Office Action, page 3). Applicants respectfully disagree. *Wasserbauer* appears to disclose that the ring 209 and waveguides 160a and 160b of *Wasserbauer* as depicted in figure 27 of *Wasserbauer* are disposed in the same layer (*Wasserbauer*, page 12, paragraph 0119, figure 27). For example, *Wasserbauer* recites:

In this embodiment, a resonant ring 209 is formed adjacent to an active or passive waveguide 160a. An additional active or passive waveguide 160b is formed adjacent to the ring 209.

(*Wasserbauer*, page 12, paragraph 0119) (emphasis added). Applicants also refer the Examiner to figure 1 of *Wasserbauer* which illustrates the x-y-z coordinate frame for the device of *Wasserbauer* (e.g., the “y” direction illustrated as being the vertical direction), and figure 27 of *Wasserbauer* which appears to further illustrate that the ring 209 and waveguides 160a and 160b of *Wasserbauer* are disposed in the same x-z plane (e.g., the “y” direction being in/out of the page containing figure 27). Thus, *Wasserbauer* does not appear to disclose or even suggest “a first optical waveguide formed in a first dielectric layer,” “an optical interconnect formed in a second dielectric layer disposed above the first dielectric layer” and “a second optical waveguide formed in a third dielectric layer disposed above the second dielectric layer” as recited by independent Claim 23 (emphasis added). To the contrary, the ring 209 and waveguides 160a and 160b of *Wasserbauer* relied on by the Examiner appear to be disposed in a single, planar layer. Accordingly, for at least this reason, Applicants respectfully submit that independent Claim 23, and Claims 24-28 and 32-34 that depend therefrom, are patentable over *Wasserbauer*.

Claims 29-31 depend from independent Claim 23. For at least the reasons discussed above, Applicants respectfully submit that independent Claim 23 is in condition for allowance. Therefore, Claims 29-31 that depend therefrom are also in condition for allowance. Moreover, *Painter* does not appear to remedy the deficiencies of *Wasserbauer*. Accordingly, Applicants respectfully request that the rejection of Claims 29-31 be withdrawn.

**CONCLUSION**

Applicants have made an earnest attempt to place this case in condition for immediate allowance. For the foregoing reasons and for other reasons clearly apparent, Applicants respectfully request reconsideration and full allowance of all pending claims.

No fee is believed due with this Response. If, however, Applicants have overlooked the need for any fee due with this Response, the Commissioner is hereby authorized to charge any fees or credit any overpayment associated with this Response to Deposit Account No. 13-4900 of Munsch Hardt Kopf & Harr, P.C..

Respectfully submitted,

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